

NEUTRONIC EVALUATED NUCLEAR-DATA FILE FOR VANADIUM*

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ABSTRACT

A comprehensive neutronic evaluated nuclear-data file for vanadium is described. The file extends from 10^{-5} eV to 20.0 MeV and contains all neutron-induced processes of significance in applied neutronic calculations associated with both fusion- and fission-energy development, including: i) the neutron total cross section, ii) elastic and inelastic scattering cross sections and associated neutron-emission spectra, iii) neutron radiative-capture cross sections, iv) the (n,2n) process, v) neutron-induced charged-particle-emission processes, and vi) neutron-induced photon production. Attention is given to uncertainty specification for the prominent processes. The corresponding numerical file is developed in ENDF/B-VI formats and has been transmitted to the National Nuclear Data Center, Brookhaven National Laboratory.

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